

111TH CONGRESS  
1ST SESSION

# H. R. 1144

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 24, 2009

Ms. EDDIE BERNICE JOHNSON of Texas (for herself, Ms. EDWARDS of Maryland, Mr. REYES, Mrs. DAHLKEMPER, Mr. MILLER of North Carolina, Mr. CARSON of Indiana, Mr. WILSON of Ohio, and Mr. GRAYSON) introduced the following bill; which was referred to the Committee on Science and Technology

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## A BILL

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Fulfilling the Potential  
5 of Women in Academic Science and Engineering Act”.

6 **SEC. 2. FINDINGS.**

7 The Congress finds the following:

1           (1) In its 2007 report, Beyond Bias and Bar-  
2           riers, the National Academies state that, to maintain  
3           its scientific and engineering leadership amid in-  
4           creasing economic and educational globalization, the  
5           United States must aggressively pursue the innova-  
6           tive capacity of all of its people—women and men.

7           (2) Women make up an increasing proportion  
8           of science and engineering majors at all institutions  
9           of higher education, including at top-rated programs  
10          such as those at the Massachusetts Institute of  
11          Technology where women make up 51 percent of its  
12          science undergraduates and 35 percent of its engi-  
13          neering undergraduates.

14          (3) Despite this progress, however, women still  
15          receive only 20 percent of all bachelor's degrees  
16          awarded in engineering and physics.

17          (4) For women to participate to their full po-  
18          tential across all science and engineering fields, they  
19          must see a career path that allows them to reach  
20          their full intellectual potential; much remains to be  
21          done to achieve that goal.

22          (5) The Federal Government provides over 60  
23          percent of research funding at institutions of higher  
24          education.

1           (6) Women are a small portion of the science  
2           and engineering faculty members at major research  
3           universities, and they typically receive fewer institu-  
4           tional resources for their research activities than  
5           their male colleagues.

6           (7) Unintentional biases and outmoded institu-  
7           tional structures are hindering the access and ad-  
8           vancement of women in science and engineering.

9           (8) Women hold a small portion of leadership  
10          positions in our institutions of higher education, sci-  
11          entific and professional societies, and honorary orga-  
12          nizations.

13          (9) Neither our institutions of higher education  
14          nor our Nation can afford such underuse of precious  
15          human capital in science and engineering.

16 **SEC. 3. DEFINITIONS.**

17          In this Act, the following definitions shall apply:

18           (1) **DIRECTOR.**—The term “Director” means  
19          the Director of the Office of Science and Technology  
20          Policy in the Executive Office of the President, act-  
21          ing through the National Science and Technology  
22          Council.

23           (2) **FEDERAL SCIENCE AGENCY.**—The term  
24          “Federal science agency” means any Federal agency  
25          that is responsible for at least 2 percent of the total

1 Federal obligation for research and development at  
2 institutions of higher education, according to the  
3 most recent data available from the National Science  
4 Foundation.

5 (3) INSTITUTION OF HIGHER EDUCATION.—The  
6 term “institution of higher education” has the  
7 meaning given such term in section 101(a) of the  
8 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

9 **SEC. 4. WORKSHOPS TO ENHANCE GENDER EQUITY IN ACA-**  
10 **DEMIC SCIENCE AND ENGINEERING.**

11 (a) IN GENERAL.—Not later than 6 months after the  
12 date of enactment of this Act, the Director shall develop  
13 a uniform policy for each Federal science agency to carry  
14 out a program of workshops that educate program offi-  
15 cers, members of grant review panels, institution of higher  
16 education mathematics, science, and engineering depart-  
17 ment chairs, and other federally funded researchers about  
18 methods that minimize the effects of gender bias in eval-  
19 uation of Federal research grants and in the related aca-  
20 demic advancement of actual and potential recipients of  
21 these grants including hiring, tenure, promotion, and se-  
22 lection for any honor based in part on the recipient’s re-  
23 search record.

24 (b) INTERAGENCY COORDINATION.—The Director  
25 shall ensure that programs of workshops across the Fed-

1 eral science agencies are coordinated and supported jointly  
2 as appropriate. As part of this process, the Director shall  
3 ensure that at least 1 workshop is supported every 2 years  
4 among the Federal science agencies in each of the major  
5 science and engineering disciplines supported by those  
6 agencies.

7 (c) SCIENTIFIC AND PROFESSIONAL SOCIETIES.—  
8 Federal science agencies may carry out the program of  
9 workshops under this section by making grants to eligible  
10 organizations. In addition to any other organizations made  
11 eligible by the Federal science agencies, the following orga-  
12 nizations are eligible for grants under this section:

13 (1) Nonprofit scientific and professional soci-  
14 eties and organizations that represent one or more  
15 science and engineering disciplines.

16 (2) Nonprofit organizations that have the pri-  
17 mary mission of advancing the participation of  
18 women in science and engineering.

19 (d) CHARACTERISTICS OF WORKSHOPS.—The work-  
20 shops shall have the following characteristics:

21 (1) Invitees to workshops shall include at  
22 least—

23 (A) the chairs of departments in the rel-  
24 evant discipline from at least the top 50 institu-  
25 tions of higher education, as determined by the

1 amount of Federal research and development  
2 funds obligated to each institution of higher  
3 education in the prior year based on data avail-  
4 able from the National Science Foundation;

5 (B) members of any standing research  
6 grant review panel appointed by the Federal  
7 science agencies in the relevant discipline;

8 (C) in the case of major science and engi-  
9 neering disciplines supported by the Depart-  
10 ment of Energy, the individuals from each of  
11 the Department of Energy National Labora-  
12 tories with personnel management responsibil-  
13 ities comparable to those of an institution of  
14 higher education department chair; and

15 (D) Federal science agency program offi-  
16 cers in the relevant discipline, other than pro-  
17 gram officers that participate in comparable  
18 workshops organized and run specifically for  
19 that agency's program officers.

20 (2) Activities at the workshops shall include re-  
21 search presentations and interactive discussions or  
22 other activities that increase the awareness of the  
23 existence of gender bias in the grant-making process  
24 and the development of the academic record nec-  
25 essary to qualify as a grant recipient including re-

1       cruitment, hiring, tenure review, promotion, and  
2       other forms of formal recognition of individual  
3       achievement and provide strategies to overcome such  
4       bias.

5           (3) Research presentations and other workshop  
6       programs, as appropriate, shall include a discussion  
7       of the unique challenges faced by women from his-  
8       torically underrepresented groups.

9           (4) Workshop programs shall include informa-  
10      tion on best practices and the value of mentoring  
11      undergraduate and graduate women students as well  
12      as outreach to girls earlier in their science, tech-  
13      nology, engineering, and mathematics education.

14      (e) REPORT.—

15           (1) IN GENERAL.—Not later than 5 years after  
16      the date of enactment of this Act, the Director shall  
17      transmit to the Committee on Science and Tech-  
18      nology of the House of Representatives and the  
19      Committee on Commerce, Science, and Transpor-  
20      tation of the Senate a report evaluating the impact  
21      of the program carried out under this section to re-  
22      duce gender bias towards women engaged in re-  
23      search funded by the Federal Government. The Di-  
24      rector shall include in this report any recommenda-

1        tions for improving the evaluation process described  
2        in paragraph (2).

3            (2) MINIMUM CRITERIA FOR EVALUATION.—In  
4        determining the effectiveness of the program, the  
5        Director shall consider, at a minimum—

6            (A) the rates of participation by invitees in  
7        the workshops authorized under this section;

8            (B) the results of attitudinal surveys con-  
9        ducted on workshop participants before and  
10       after the workshops;

11          (C) any institutional policy or practice  
12       changes reported by participants from institu-  
13       tions of higher education; and

14          (D) for institution of higher education de-  
15       partment chairs and Department of Energy Na-  
16       tional Laboratory employees who participated in  
17       at least 1 workshop 3 or more years prior to  
18       the due date for the report, trends in the data  
19       for the department represented by the chair or  
20       employee including—

21            (i) the number and percent of women  
22        faculty;

23            (ii) the number and percent of women  
24        in tenure-track positions by rank;

- 1 (iii) tenure promotion outcomes by
- 2 gender;
- 3 (iv) years in rank by gender;
- 4 (v) time at institution by gender;
- 5 (vi) attrition by gender;
- 6 (vii) the number of women who are in
- 7 nontenure-track positions, including teach-
- 8 ing and research;
- 9 (viii) the number and percent of
- 10 women faculty in endowed or named
- 11 chairs; and
- 12 (ix) the number and percent of women
- 13 faculty on promotion and tenure commit-
- 14 tees.

15 (f) MINIMIZING COSTS.—To the extent practicable,

16 workshops shall be held in conjunction with national or

17 regional disciplinary meetings to minimize costs associated

18 with participant travel.

19 (g) AUTHORIZATION OF APPROPRIATIONS.—Each

20 Federal science agency is authorized to contribute funds,

21 from funds which are otherwise authorized, to support the

22 workshop and evaluation requirements under this section,

23 including—

1           (1) providing grants to organizations, including  
2           the organizations identified under subsection (c), to  
3           plan and organize the workshops; and

4           (2) reimbursing the travel and lodging costs of  
5           invited speakers and workshop participants.

6 **SEC. 5. EXTENDED RESEARCH GRANT SUPPORT AND IN-**  
7 **TERIM TECHNICAL SUPPORT FOR CARE-**  
8 **GIVERS.**

9           (a) **POLICIES FOR CAREGIVERS.**—Not later than 6  
10 months after the date of enactment of this Act, the Direc-  
11 tor shall develop a uniform policy to—

12           (1) extend the period of grant support for fed-  
13 erally funded researchers who have caregiving re-  
14 sponsibilities; and

15           (2) provide funding for interim technical staff  
16 support for federally funded researchers who take a  
17 leave of absence for caregiving responsibilities.

18           (b) **REPORT.**—Upon developing the policy required  
19 under subsection (a), the Director shall transmit a copy  
20 of the policy to the Committee on Science and Technology  
21 of the House of Representatives and to the Committee on  
22 Commerce, Science, and Transportation of the Senate.

1 **SEC. 6. COLLECTION OF DATA ON FEDERAL RESEARCH**  
2 **GRANTS.**

3 (a) IN GENERAL.—Each Federal science agency shall  
4 collect standardized annual composite information on de-  
5 mographics, field, award type and budget request, review  
6 score, and funding outcome for all applications for re-  
7 search and development grants to institutions of higher  
8 education supported by that agency.

9 (b) REPORTING OF DATA.—

10 (1) The Director shall establish a policy to en-  
11 sure uniformity and standardization of data collec-  
12 tion required under subsection (a).

13 (2) Not later than 2 years after the date of en-  
14 actment of this Act, and annually thereafter, each  
15 Federal science agency shall submit data collected  
16 under subsection (a) to the National Science Foun-  
17 dation.

18 (3) The National Science Foundation shall be  
19 responsible for storing and publishing all of the  
20 grant data submitted under paragraph (2) in con-  
21 junction with the biennial report required under sec-  
22 tion 37 of the Science and Engineering Equal Op-  
23 portunities Act (42 U.S.C. 1885d).

1 **SEC. 7. PUBLICATION OF LIST OF INSTITUTIONAL PARTICI-**  
2 **PATION IN WORKSHOPS TO ENHANCE GEN-**  
3 **DER EQUITY IN ACADEMIC SCIENCE AND EN-**  
4 **GINEERING.**

5       The Director, on the basis of data reported by the  
6 Federal science agencies, shall publish annually a list of  
7 institutions of higher education science and engineering  
8 departments represented by individuals who attend the  
9 workshops described in section 4. The list shall be publicly  
10 available through the website of the Office of Science and  
11 Technology Policy. Any institution of higher education  
12 science and engineering department that is publicized on  
13 the list may publicize its receipt of such recognition on  
14 its website, in printed materials, or through other means.

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